

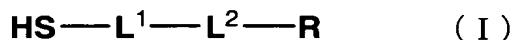
Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for immobilizing nucleic acid on a solid phase-substrate by co-adsorption, comprising:

forming a composition ~~bringing the solid phase substrate into contact with a~~
~~composition comprising:~~

a total concentration of 0.1 to 2 μ M of a nucleic acid as a probe, and
a compound or a salt thereof, the compound being represented by the following formula:



where:

L^1 is a single bond or a C_{4-15} -alkylene an alkylene group having 1 to 15 carbon atoms;

L^2 is selected from the group consisting of a single bond, a nucleic acid, a polyethylene glycol group, -CO-NH-, ~~or~~ and -NH-CO-;

R is selected from the group consisting of a hydroxyl group, an amino group, a ferrocenyl group, ~~or~~ and a carboxyl group; and

L^1 and L^2 are not both single bonds; and

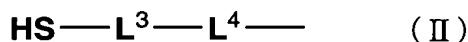
then bringing the solid phase substrate into contact with the composition; and
incubating the composition in contact with a surface of the solid phase
substrate; and

wherein the composition comprises a nucleic acid and a compound represented
by formula I at a ratio of 40/60 to 60/40.

2. (Currently Amended) The method according to claim 1, wherein:

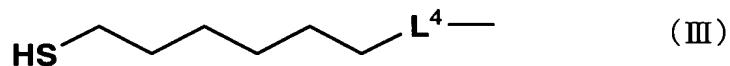
the nucleic acid as a probe comprises a single-stranded polynucleotide or an oligonucleotide consisting of modified or unmodified nucleotides selected from the group consisting of, single-stranded DNA, RNA, PNA, amino cyclohexanyl nucleic acid, or and hexitol nucleic acid.

3. (Currently Amended) The method according to claim 1, wherein the nucleic acid as the probe comprises at ~~the a~~ 3' end or ~~the a~~ 5' end a group represented by the following formula:



wherein L^3 is a C_{1-15} alkylene an alkylene group having 1 to 15 carbon atoms, and L^4 is a single bond or a spacer.

4. (Currently Amended) The method according to claim 1, wherein the nucleic acid as the probe has at the 5' end a group represented by the following formula:



wherein L^4 is a single bond or a spacer.

5. (Previously Presented) The method according to claim 4, wherein L^4 is selected from the group consisting of a nucleic acid, -CO-NH-, -NH-CO-, a polyethylene glycol group, and a polyethylene glycol phosphate group.

6. (Currently Amended) The method according to claim 1, wherein the total concentration of the nucleic acid and the compound represented by formula I or the a salt thereof in the composition is 0.5 to 1.5 μ M.

7. (Currently Amended) The method according to claim 1, wherein the total concentration of the nucleic acid and the compound represented by formula I or the a salt thereof in the composition is 1 μ M.

8. (Canceled)

9. (Currently Amended) The method according to claim 1, wherein R in the compound represented by formula I is a hydroxyl group.

10. (Withdrawn) The method according to claim 1, wherein L¹ in the formula I is a single bond, and L² is a polyethylene glycol group.

11. (Currently Amended) The method according to claim 1, wherein L¹ in the compound represented by formula I is a ~~C₄₋₈-an~~ alkylene group having 4 to 8 carbon atoms, and L² is a single bond.

12. (Currently Amended) The method according to claim 1, wherein the formula represented by compound I is 6-mercaptop-1-hexanol.

13. (Original) The method according to claim 1, wherein the solid phase substrate is a single layered substrate or a multiple layered substrate comprising at least one material selected from the group consisting of glass, polymer resin and metal.

14. (Currently Amended) The method according to claim 1, wherein ~~the~~a surface of the solid phase substrate on which nucleic acid is adsorbed is coated with a thin gold film.

15. (Currently Amended) The method according to claim 1, wherein the solid phase substrate ~~is comprises~~ a glass substrate ~~with and~~ a thin gold film vapor-deposited on ~~its~~ ~~a surface of, and may further comprises, at least one intermediate layer between the thin gold film and the glass substrate.~~

16. (Currently Amended) The method according to claim 1, wherein the nucleic acid as the probe has a base length of 15 to 30 base length nucleotides.

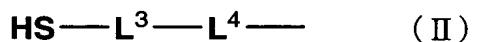
17. (Original) The method according to claim 1, wherein the incubation is carried out at a temperature of 25° C to 40° C.

18. (Currently Amended) The method according to claim 1, wherein:

the nucleic acid as the probe ~~is comprises~~:

a single-stranded polynucleotide or ~~an~~ oligonucleotide comprising nucleotides selected from the group consisting of ~~single-stranded~~ DNA, RNA, and PNA, and may also have the group represented by formula II; PNA; and

at the 3' end or the 5' end a group represented by the following formula:



wherein L³ is an alkylene group, and L⁴ is a single bond or a spacer;

the formula represented by compound I is 6-mercaptop-1-hexanol;

the total concentration of the nucleic acid and 6-mercaptop-1-hexanol in the composition is 0.5 to 1.5 μM ; and

the solid phase substrate ~~is comprises~~ a glass substrate ~~with~~ and a thin gold film vapor-deposited on ~~its~~ a surface of the glass substrate, and further, at least one intermediate layer may be made ~~exist~~ between the thin gold film and the glass substrate.

19-25. (Cancelled)